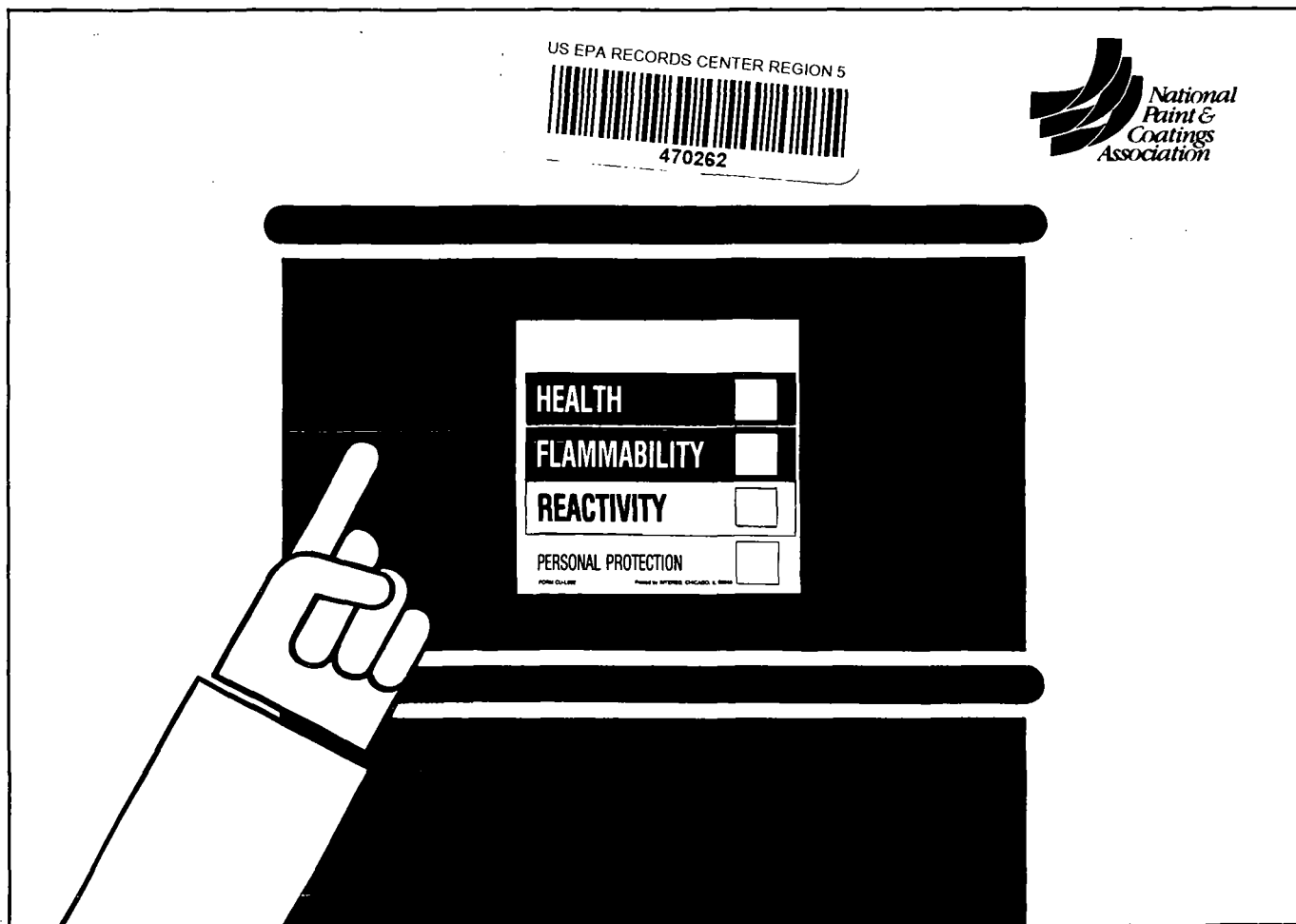


F.1
1981



An Employee's Guide to the HMIS™ HAZARDOUS MATERIALS IDENTIFICATION SYSTEM



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WALLET
CARD →

FRONT

















POSTER ↘

Hazardous Materials Identification System



















HAZARD INDEX

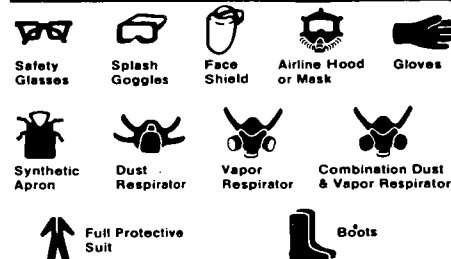
- | | |
|-------------------|------------------|
| 4 Severe Hazard | 1 Slight Hazard |
| 3 Serious Hazard | 0 Minimal Hazard |
| 2 Moderate Hazard | |

PERSONAL PROTECTION INDEX

- A** 
-
- B**  + 
-
- C**  +  + 
-
- D**  +  + 
-
- E**  +  + 
-
- F**  +  +  + 

BACK

- G**  +  + 
-
- H**  +  +  + 
-
- I**  +  + 
-
- J**  +  +  + 
-
- K**  +  +  + 
-
- X** Ask your supervisor for specialized handling directions





































Hazardous Materials Identification System

HAZARD INDEX

- 4 Severe Hazard**
3 Serious Hazard
2 Moderate Hazard
1 Slight Hazard
0 Minimal Hazard

Affix HMIS label to poster in this space

PERSONAL PROTECTION INDEX

- A** 
-
- B**  + 
-
- C**  +  + 
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- D**  +  + 
-
- E**  +  + 
-
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- H**  +  +  + 
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- I**  +  + 
-
- J**  +  +  + 
-
- K**  +  +  + 
-
- X** Ask your supervisor for guidance.



TOM, THIS IS BILL, OUR NEW CLAIMS ADJUSTER. HE'S HERE TO GET ACQUAINTED WITH OUR OPERATIONS AND HE'S ESPECIALLY INTERESTED IN OUR SAFETY PROGRAMS.



WELL, THEN, LET ME TELL YOU ABOUT THE HMIS OR HAZARDOUS MATERIALS IDENTIFICATION SYSTEM. IT SHOWS EVERYONE HOW TO SAFELY HANDLE THE MATERIALS THEY WORK WITH... YOU KNOW THERE ARE MORE THAN 1500 DIFFERENT COMPOUNDS AND CHEMICALS IN A PLANT THAT MANUFACTURES PAINTS AND COATINGS.



HEALTH

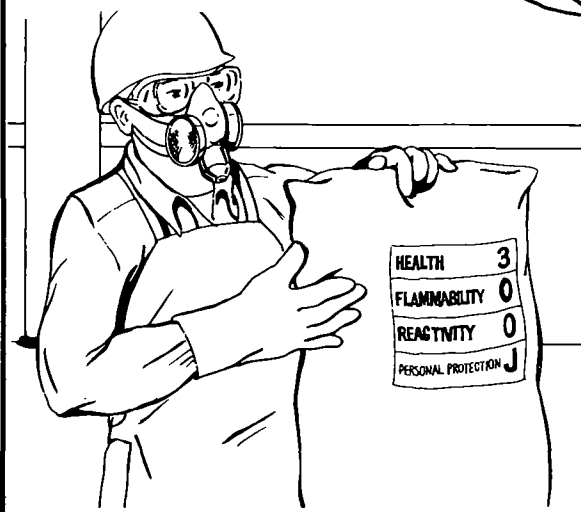
FLAMMABILITY

REACTIVITY

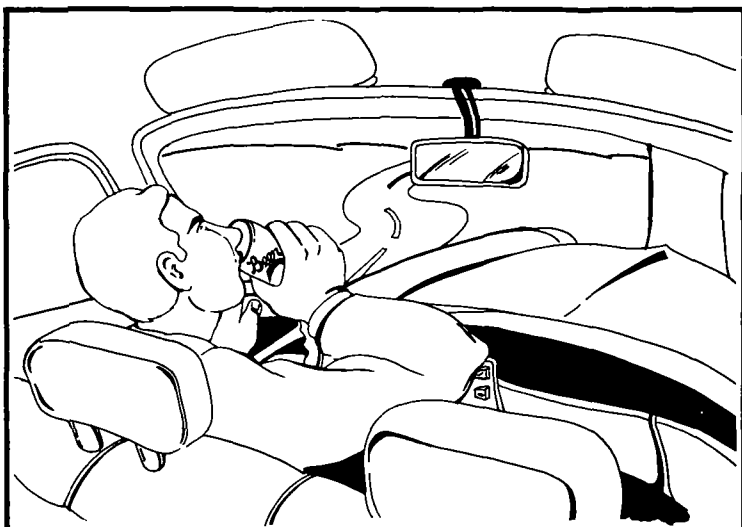
PERSONAL PROTECTION

EACH OF THE COLORS STANDS FOR A SPECIFIC KIND OF HAZARD AND THE NUMBER IN THAT COLOR INDICATES HOW MUCH OF A POTENTIAL HAZARD IT IS... THE WHITE PART OF THE LABEL TELLS YOU WHAT KIND OF PROTECTIVE EQUIPMENT TO WEAR WHEN WORKING WITH IT.

LIKE WHETHER YOU NEED GLOVES OR RESPIRATORS AND THINGS LIKE THAT? SOUNDS LIKE THIS IS A PRETTY DANGEROUS PLACE TO WORK.



“THIS LABEL IS THE KEY TO THE WHOLE SYSTEM. ALL OF THE RAW MATERIALS IN THE PLANT HAVE ONE OF THESE FOUR COLORED LABELS ON IT.”



"THERE ARE DANGERS INVOLVED IN DRIVING. IF YOU ARE A CAREFUL DRIVER YOU CAN KEEP THESE DANGERS FROM HAPPENING TO YOU. BUT IF YOU DRINK AND DRIVE, YOU INCREASE THE HAZARDS OF DRIVING AND THE CHANCE THAT THE DANGERS WILL HURT YOU. HMIS TELLS YOU ABOUT DANGERS THAT CAN BECOME HAZARDS, THE DEGREE OF EACH HAZARD AND HOW TO PROTECT YOURSELF."

SO THESE COLORED LABELS HELP WORKERS BETTER UNDERSTAND THE MATERIALS THAT THEY WORK WITH AND HELP THEM AVOID DANGER.

THAT'S RIGHT. THE BLUE SECTION AT THE TOP INDICATES THE OVERALL LEVEL OF HEALTH HAZARD FROM CONTACT WITH THE MATERIAL

HEALTH

FLAMMABILITY

REACTIVITY

PERSONAL PROTECTION

HEALTH HAZARD RATING CHART

0 MINIMAL HAZARD	no significant risk to health
1 SLIGHT HAZARD	irritation or minor reversible injury possible
2 MODERATE HAZARD	temporary or minor injury may occur
3 SERIOUS HAZARD	major injury likely unless prompt action is taken and medical treatment is given
4 SEVERE HAZARD	life threatening major or permanent damage may result from single or repeated exposures

THERE ARE A LOT OF WAYS YOU CAN COME INTO CONTACT WITH MATERIAL IN A PLANT—YOU CAN GET IT ON YOUR HANDS OR IT CAN SPLASH AND SOAK THROUGH YOUR CLOTHES. YOU COULD BREATHE THE DUST OR VAPORS. SOME MATERIALS CAUSE HEALTH PROBLEMS IMMEDIATELY. THEY ARE ACUTE HAZARDS. OTHER MATERIALS ARE CHRONIC HAZARDS—THEY'RE THINGS THAT TAKE TIME, BUT WITH REPEATED EXPOSURE COULD HAVE DISASTROUS EFFECTS



NOW THERE AREN'T ANY MATERIALS THAT ARE TOTALLY HAZARD FREE, BUT ONES WITH A ZERO IN THE BLUE SECTION HAVE A MINIMAL HAZARD... A ONE INDICATES A SLIGHT HAZARD... A TWO IS FOR A MODERATE HEALTH HAZARD... MATERIALS WITH A THREE HAVE A SERIOUS HAZARD; THEY COULD HAVE A SEVERE EFFECT ON YOUR HEALTH, IF YOU DON'T HANDLE THEM PROPERLY. A FOUR IS THE HIGHEST POSSIBLE HAZARD RATING. THESE MATERIALS MUST BE HANDLED WITH THE GREATEST CAUTION.



WELL, A GOOD NUMBER OF THE MATERIALS WE USE MIGHT NOT BURN AT ROOM TEMPERATURE, BUT IF THEY ARE HEATED, THEY CAN BECOME FLAMMABLE. MATERIALS RATED ZERO WON'T BURN UNLESS THEY'RE HEATED TO VERY HIGH TEMPERATURES.



HEALTH

FLAMMABILITY

REACTIVITY

PERSONAL PROTECTION

D

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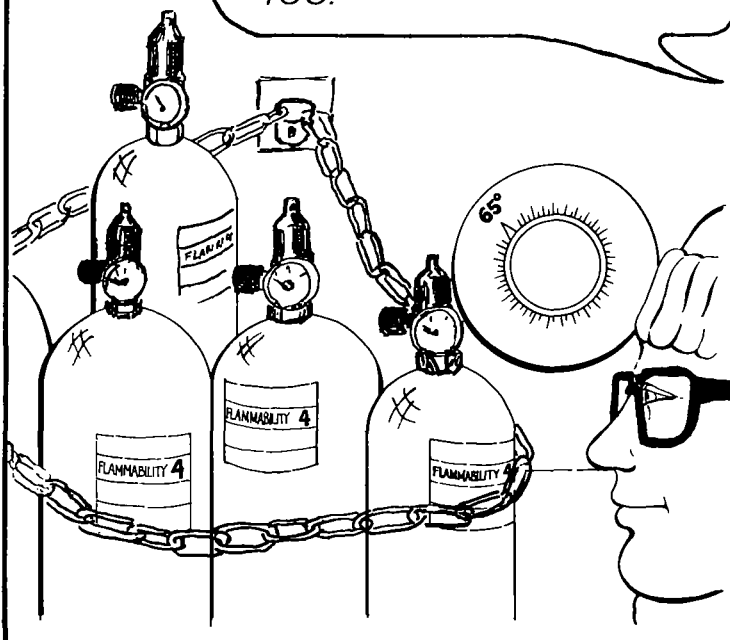
R

G

"WHAT ABOUT THE RED PART OF THE LABEL, FLAMMABILITY? DO YOU USE THE 0-4 SCALE FOR THIS SECTION, TOO? I MEAN I THOUGHT SOMETHING WOULD EITHER BURN OR IT WOULDN'T BURN!"

MATERIALS WHICH ARE RATED FOUR ARE FLAMMABLE EVEN AT ROOM TEMPERATURE. ALL OF THE RATINGS IN-BETWEEN 0 AND 4 NEED TO BE HEATED SOMEWHAT FOR THEM TO BURN.

SO YOU HAVE TO BE CAREFUL HOW YOU STORE MATERIALS, TOO.



FLAMMABILITY HAZARD RATING CHART

0 MINIMAL HAZARD

materials which are normally stable and will not burn unless heated

1 SLIGHT HAZARD

materials that must be preheated before ignition will occur. Flammable liquids in this category will have flash points (the lowest temperature at which ignition will occur) at or above 200°F (NFPA Class 111B)

2 MODERATE HAZARD

material which must be moderately heated before ignition will occur, including flammable liquids with flash points at or above 100°F and below 200°F. (NFPA Class 11 & Class 111A)

3 SERIOUS HAZARD

materials capable of ignition under almost all normal temperature conditions, including flammable liquids with flash points below 73°F and boiling points above 100°F as well as liquids with flash points between 73°F and 100°F (NFPA Classes 1B and 1C)

4 SEVERE HAZARD

very flammable gases or very volatile flammable liquids with flash points below 73°F and boiling points below 100°F (NFPA Class 1A)

THAT'S RIGHT YOU'RE CATCHING ON. NOW THE YELLOW PART OF THE LABEL RATES THE REACTIVITY OF A MATERIAL—ITS LIKELIHOOD TO EXPLODE.

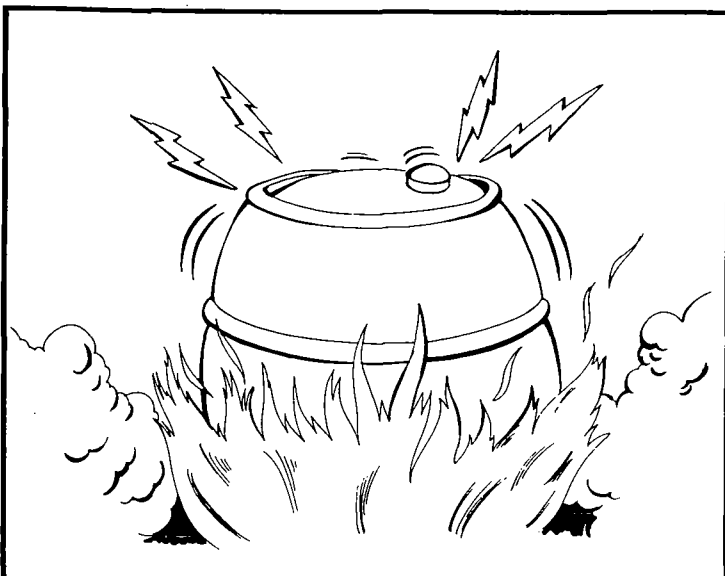
EXPLODE! I THOUGHT THIS WAS A PAINT FACTORY, NOT A MUNITIONS PLANT



VERY FEW OF THE MATERIALS WE USE WILL EXPLODE UNDER ANY CONDITIONS. THOSE THAT WILL ARE HANDLED WITH GREAT CARE. MOST MATERIALS WE USE ARE RATED ZERO, WHICH INDICATES THAT THEY ARE CHEMICALLY STABLE EVEN IN FIRE. THOSE RATED ONE WILL ONLY BECOME UNSTABLE AT HIGH TEMPERATURES OR PRESSURES.

MATERIALS RATED TWO ARE NORMALLY UNSTABLE, BUT WHILE THEY MAY REACT CHEMICALLY, THEY WON'T EXPLODE. HOWEVER, THEY MAY REACT VIOLENTLY WITH WATER.

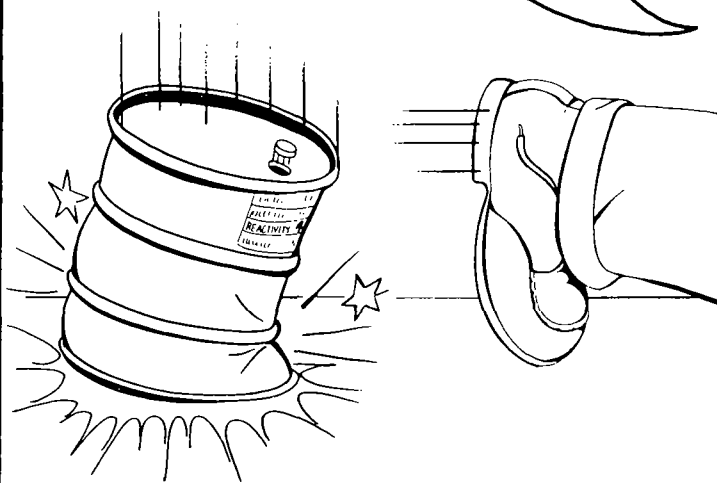




"WHILE MATERIALS RATED THREE ARE CAPABLE OF EXPLODING, THEY HAVE TO BE HEATED IN A CONFINED AREA TO ACTUALLY EXPLODE."

MATERIALS RATED FOUR ARE THE ONLY ONES THAT MIGHT EXPLODE AT NORMAL TEMPERATURES AND PRESSURES. THEY MIGHT BE HEAT OR SHOCK SENSITIVE. ANYBODY HANDLING A MATERIAL RATED FOUR WOULD GET SPECIAL INSTRUCTIONS AND SUPERVISION.

I CAN SEE HOW THESE LABELS HELP WORKERS IDENTIFY HAZARDS, BUT HOW DO THEY KNOW HOW TO PROTECT THEMSELVES?



REACTIVITY HAZARD RATING CHART

0 MINIMAL HAZARD	materials which are normally stable, even under fire conditions, and which will not react with water.
1 SLIGHT HAZARD	materials which are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently.
2 MODERATE HAZARD	materials which in themselves are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water.
3 SERIOUS HAZARD	materials which are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation, or materials which react explosively with water.
4 SEVERE HAZARD	these materials are readily capable of detonation or explosive decomposition at normal temperatures and pressures.

OUR WORKERS ARE PROTECTED IN A LOT OF DIFFERENT WAYS. ENGINEERING CONTROLS ARE THE MOST IMPORTANT MEANS OF PROTECTION. AND WE ALSO HAVE OPERATING PROCEDURES AND WORK PRACTICES THAT ELIMINATE A LOT OF HAZARDS... BUT SOMETIMES YOU STILL NEED TO USE PERSONAL PROTECTIVE EQUIPMENT.

THAT'S WHAT THE BOTTOM, WHITE PART OF THE LABEL REFERS TO.



UH HUH. THE LETTERS IN THAT SECTION TELL YOU WHAT EQUIPMENT TO WEAR WHEN YOU'RE HANDLING THAT MATERIAL. FOR EXAMPLE, SOMETHING MARKED B MEANS YOU HAVE TO WEAR GLOVES AND SAFETY GLASSES TO HANDLE IT SAFELY IF SOMETHING IS MARKED J YOU'D WEAR GLOVES, SPLASH GOGGLES, A SYNTHETIC APRON AND RESPIRATOR THAT FILTERS OUT BOTH DUST AND VAPORS.



FLAMMABILITY

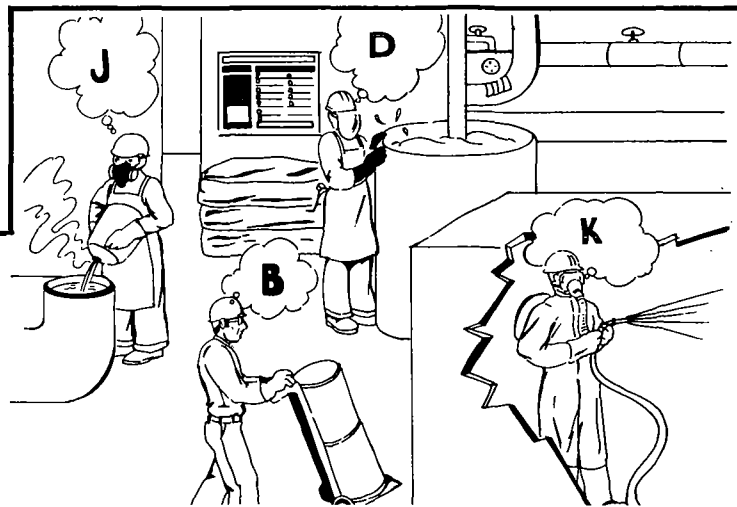
REACTIVITY

PERSONAL PROTECTION B



ITEMS MARKED X REQUIRE SPECIAL HANDLING AND THE EMPLOYEE SHOULD TALK TO HIS SUPERVISOR BEFORE HANDLING THE MATERIAL.

EACH OF THE LETTERS USED IN THE PERSONAL PROTECTION SECTION OF THE LABEL REPRESENTS A SPECIFIC COMBINATION OF PERSONAL PROTECTIVE EQUIPMENT. THE EMPLOYEE MUST WEAR THAT COMBINATION WHENEVER HE HANDLES THAT MATERIAL.



PERSONAL PROTECTION EQUIPMENT CODES

A

B +

C + +

D + +

E + +

F + + +

G + +

H + + +

I + +

J + + +

K + + +

X Ask your supervisor for guidance.

Safety Glasses



Face Shield



Splash Goggles



Air Line Hood or Mask



Gloves



Synthetic Apron



Dust Respirator



Vapor Respirator



Dust & Vapor Respirator

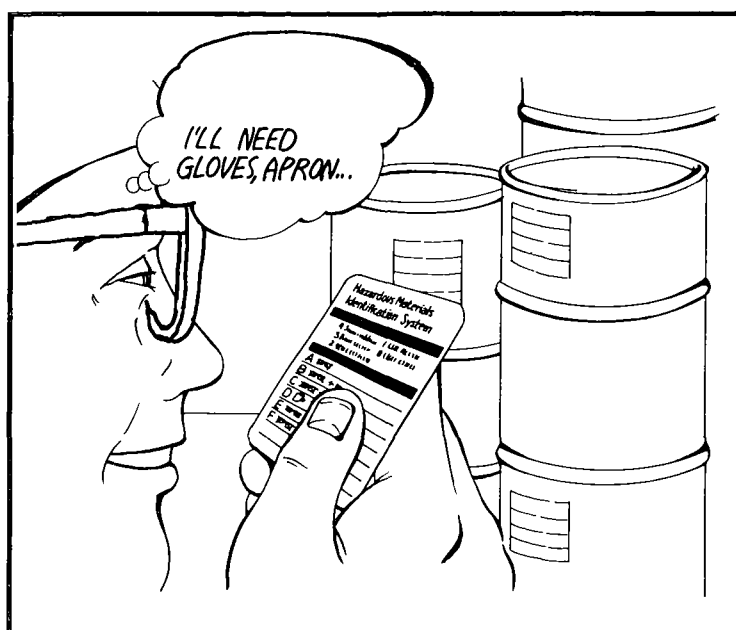
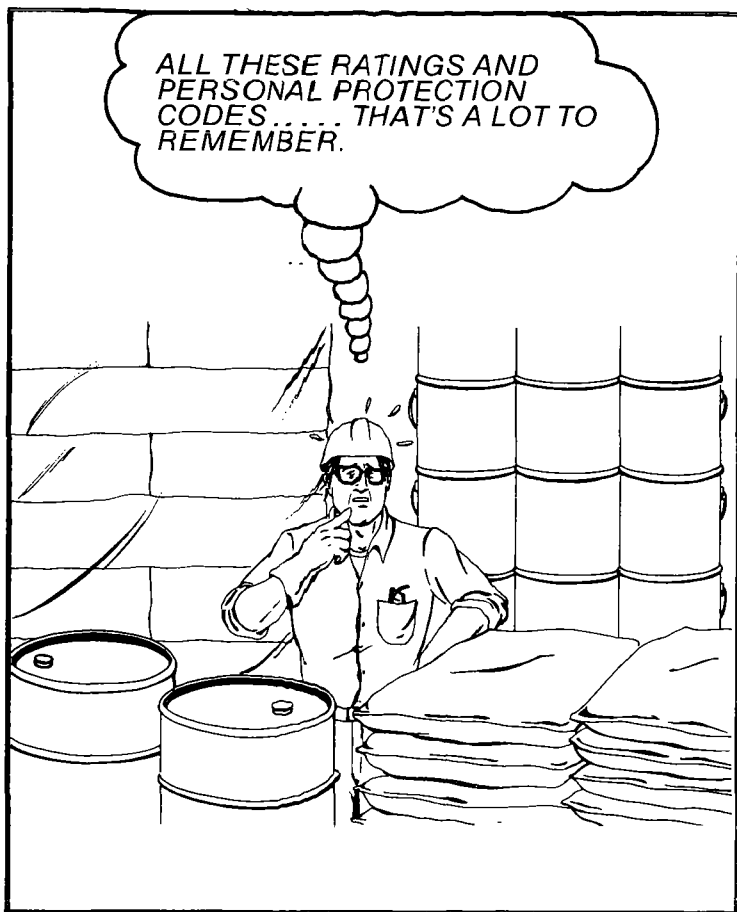


Full Suit

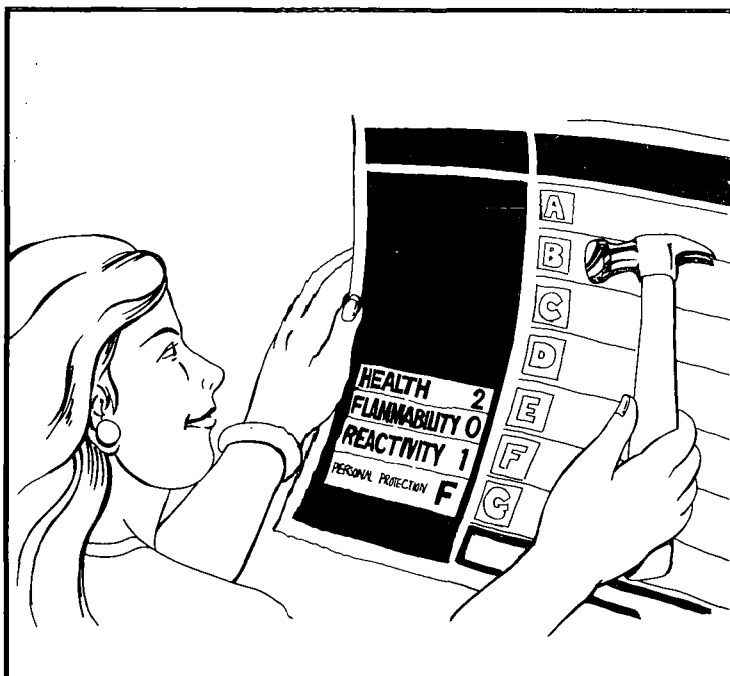


Boots

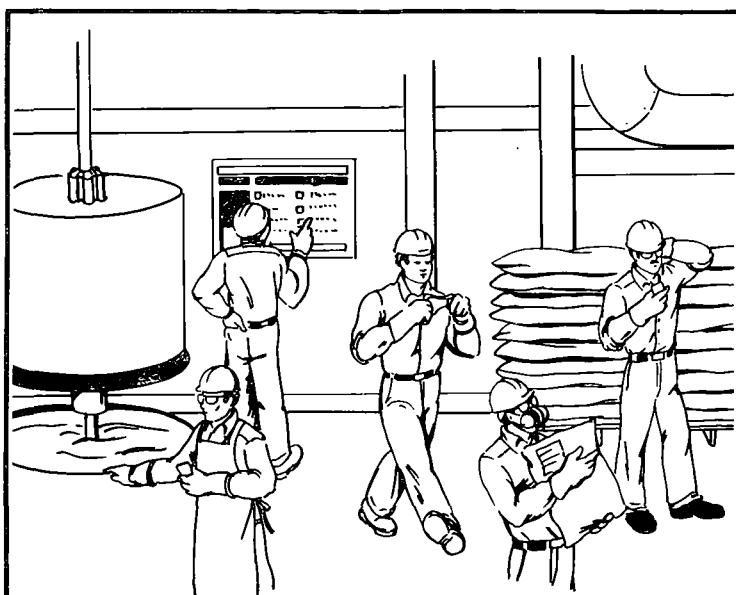




"WE HAVE A PRETTY THOROUGH EDUCATION AND TRAINING PROGRAM. FIRST, EVERYONE SEES A SLIDE SHOW THAT EXPLAINS THE SYSTEM. EACH EMPLOYEE RECEIVES A BOOKLET THAT EXPLAINS THE SYSTEM AND ONE OF THESE WALLET CARDS. EMPLOYEES HAVE TO CARRY THESE WALLET CARDS WITH THEM AT ALL TIMES IN THE PLANT."



"THEN THERE ARE THESE POSTERS WITH THE PERSONAL PROTECTION INDEX AND HAZARD RATING SCALE EXPLAINED ON THEM. THEY ARE DISPLAYED ALL OVER THE PLANT."



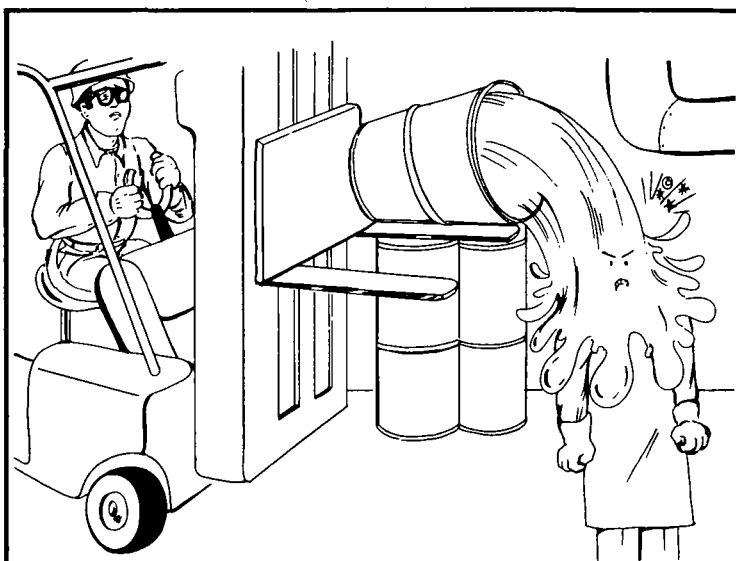
BOTH THE WALLET CARD AND THE POSTER ARE THERE SO THAT THE EMPLOYEE CAN CHECK THE MEANING OF A RATING OR PERSONAL PROTECTION CODE AT ANY TIME.



"BUT IF HE'S CONFUSED OR IN DOUBT, WE ALWAYS TELL HIM TO ASK HIS SUPERVISOR."



"YOU SEE WHAT'S REALLY IMPORTANT IS THAT EVERY WORKER HAS ALL THE INFORMATION HE NEEDS TO WORK SAFELY WITH ANY MATERIAL IN THIS PLANT."



DON'T YOU WORRY THAT SOME PEOPLE MIGHT THINK IT'S TOO MUCH BOTHER AND JUST NOT PAY ANY ATTENTION?

THAT'S ALWAYS GOING TO BE A PROBLEM, BUT MOST PEOPLE CARE ENOUGH TO PROTECT THEIR OWN HEALTH AND SAFETY AND THEY REALIZE THAT BEING CAREFUL AND FOLLOWING SAFETY PROCEDURES DOESN'T JUST AFFECT THEM. IT AFFECTS THE GUY AT THE NEXT WORK STATION AND MAYBE THE WHOLE PLANT. ONE GUY'S CARELESSNESS COULD HURT A LOT OF PEOPLE.

THAT'S WHY EVERYBODY IS INVOLVED IN THE HMIS - TOP MANAGEMENT AND THE GUY ON THE LINE WORK TOGETHER TO PROTECT THE HEALTH AND SAFETY OF THE EMPLOYEES OF THIS COMPANY. LET'S GO GET SOME COFFEE AND I'LL TELL YOU ABOUT SOME OF OUR OTHER SAFETY PROCEDURES.....

Snacks



HMIS EMPLOYEE QUIZ

This quiz will serve as a record of your training in the Hazardous Materials Identification System (HMIS) and as such will be placed in your permanent employment file.

NAME: _____ SS# _____

PLANT: _____ JOB: _____

1. What do the initials HMIS mean? _____

2. What three types of hazards are rated by the HMIS?

1. _____

2. _____

3. _____

3. What do the letters in the personal protection equipment section of the label represent? _____

4. What should you do if you see the letter "X" in the personal protection equipment section of a label? _____

5. Which type of hazard is represented by each of the three colors listed below?

1. red: _____

2. blue: _____

3. yellow: _____

Continued



HMIS EMPLOYEE QUIZ

Continued

6. What must you carry with you at all times in the plant? _____

7. Write the correct number next to the degree of hazard which it represents.

_____ slight hazard

_____ serious hazard

_____ severe hazard

_____ minimal hazard

_____ moderate hazard

8. What is the difference between a chronic health hazard and an acute health hazard?

9. In addition to asking your supervisor and checking your wallet card, what is another way to check the meaning of a rating or personal protection code on an HMIS label? _____

COMMENTS ABOUT THE HMIS TRAINING PROGRAM: _____
